

Serial No.: 10/084,498

Attorney Docket No.: 4481-045

REMARKS

The courtesies extended to the undersigned attorney for applicant by examiners Aghdam and Ghayour at the interview on March 7, 2006 are noted.

At the interview, it was agreed that claim 9, upon which claims 10-12 depend, was improperly rejected on the combination of Roberts et al., US patent 5,425,060, and Blazo, US patent 5,754,437. The allegation in the Office Action that Roberts et al. controls the phase of a local digital clock signal is incorrect. In Roberts et al., the output of oscillator 77 is applied to the input of analog to digital converter 75, to control sampling of the data input signal 73. The local digital clock signal is the reference frequency applied to mixers 74, having a second input responsive to the output of analog to digital converter 75. In the analysis of claim 1, the reference frequency is identified as the input to mixers 74. Hence, the contention in the Office Action regarding the reference frequency in claim 1 is contrary to the position in the Office Action regarding the reference frequency in claim 9. As a result of the foregoing, it was agreed at the interview that the rejection of claims 9-12 will be withdrawn.

No agreement was reached at the interview with regard to claims 1 and 20. The Roberts et al. reference is concerned with processing data signals, rather than a recovered clock signal, as required by claims 1 and 20. The output of phase detector 78 of Roberts et al. is applied as a control for the frequency and/or phase of oscillator 77 via loop filter 79 to excise static phase errors (column 9, line 21). The output of loop filter 79 has nothing to do with processing to determine a parameter of an electronic system from which a clock signal is recovered, as required by claims 1 and 20.

One of ordinary skill in the art would not have modified Roberts et al. as a result of Blazo by connecting circuit 70 of Blazo (that includes a clock recovery feature) between the input signal on lead 73 of Roberts et al. and the input of analog to digital converter 75 to enable loop

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filter 79 to produce a signal that determines a parameter of the electronic system from which the signal on lead 73 is derived. The requirements of the Blazo system are at odds with those of Roberts et al.. The essence of Roberts et al. is the variable frequency and/or phase control of oscillator 77 in response to the phase difference indication derived from the output of loop filter 79. In contrast, analog-to-digital converter 50 of Blazo is driven by (1) fixed frequency system clock 68, that is locked to cesium atomic reference clock 34 (column 8, lines 60 and 62), and (2) the output of phase detector 48. The output of phase detector 48 indicates the phase between the recovered clock from circuit 70 and the output of digitally controlled frequency source 46 (column 8, lines 2-5). Phase detector 48 responds to the phase difference of the recovered clock and variable frequency inputs thereof to derive a pulse width modulated signal that is low pass filtered and supplied to the input of analog to digital converter 50 (column 9, lines 12-14) that is suitable for measuring jitter (column 9 lines 9-12). The frequency of source 46 is controlled by the output of digital signal processor 44, in turn responsive to the output of analog-to-digital converter 50 that indicates the phase difference of the recovered clock having a first frequency greater than the loop bandwidth of phase locked loop 36 (column 8, lines 5-9). The output of of analog-to-digital converter 50 is digitally processed to derive indications of jitter and/or wander of the recovered clock.

Blazo emphasizes the importance of very accurate reference clock 34 that controls fixed frequency sampling by analog-to-digital converter 50 and analog phase locked loop 36, that is upstream of the analog-to-digital converter 50 (column 8, lines 31-38). These important Blazo features are completely different from the Roberts et al. features wherein all processing is digital and in response to the output of analog-to-digital converter 75, that is driven by the variable frequency and/or phase output of oscillator 77. Roberts et al. has no analog processing to obtain

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jitter information from a clock recovered signal prior to a data signal being applied to analog-to-digital converter 75. Because of these differences between Blazo, that is concerned with determining a parameter of an electronic system from a recovered clock, and Roberts et al. that is not concerned with determining a parameter of an electronic system from a recovered clock, one of ordinary skill in the art would not have modified Roberts et al. to include the Blazo clock recovery feature. The combination of references is a result of hindsight resulting from applicant's application.

In view of the foregoing amendments and remarks, favor reconsideration and allowance are respectfully requested and deemed in order.

Early issuance of a Notice of Allowance is courteously solicited.

The Examiner is invited to telephone the undersigned, Applicant's attorney of record, to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,
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